



## 2 from Erie County to international fair

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- Posted by Emma Orn

BUFFALO, N.Y. Press release - Erie County sends TWO to international science fair!

On March 29th, 47 students from across Upstate New York competed at the Tri Region Science and Engineering Fair (TRSEF) in Syracuse. Among them were Jimmitti Teysir from Buffalo City Honors and Josh Vekhter from Williamsville East High. These two students were selected for the Grand Award - representing the 27 counties served by the TRSEF at the Intel International Science and Engineering Fair (ISEF)! And this was the first time either school competed at a regional science fair with the international affiliation.

The TRSEF is delighted to bring these two young people to the ISEF in Reno, Nevada on May 10th for a week of celebration, intense competition, and discovery. From over 50 countries, 1600 high school students selected from millions of science fair students worldwide will meet for workshops, trips, special events such as a panel of Nobel Laureates answering their questions ... and the premier science fair in the world. ISEF offers \$4 million in prize money and scholarships!

Jimmitti's project "The Genetic Code in Anaeromyxobacter dehalogenans (Adhal)" began with intensive study of the literature, learning about the computer coding of genes in general and of Adhal in particular. She then spent the past year in actual research studying the genes of bacteria as part of an effort to fight cancer.

One of the problems with a cancer cell is that it will not destroy itself when it ceases to be a normal cell. Bacteria do have this "self-destruct response" - apoptosis. Jimmitti wants to find

where in a bacterium's genes the coding is for that response. That will open the door not only to improved understanding of the genetic code, but also to a possible way to introduce apoptosis to cancer cells!

Josh came to the TRSEF with our first project in the mathematical sciences category. In fact, our judges do not remember seeing a "math project" at any fair held in Syracuse for the past 25 years! "Graph Crossings and Cyclic Permutations: Towards a Proof of Zarankiewicz's Conjecture" began with Josh's year-long effort to understand a concept that was simply "tossed out" at math camp one summer.

As science fair students do, he studied independently, learning as much as he could about this question. Next he consulted his mathematics teacher in the Gifted Math Program, who connected him with a faculty member at Yale University.

These mentors provided no answers; rather, they served as careful listeners and knowledgeable critics as Josh plowed his way through his analyses. Jimmitti's science research teacher Ms. Kelly Hyla (City Honors) and Josh's teacher Dr. Joaquin Carbonara (Gifted Math Program / Buffalo State) are the TRSEF educators eligible for the Agilent Teacher Award, to be announced on May 14th.

TRSEF's Official Party - Jimmitti, Josh, Ms. Hyla and Mrs. Wood - will depart from Buffalo Niagara International Airport on Sunday, May 10th.

Available: Photo of each student during one of his/her judging interviews, Photo of both ISEF Finalists following the announcement of their selection, Interviews with the students and their teachers/mentors, Interview with Fair Director about the TRSEF and ISEF experiences, Please contact the Director ASAP to make arrangements.

This is the story about the future - our own and that of so many young people wanting to explore careers and discover talents. Please celebrate with these great kids who are making good choices and doing good things.

The TRSEF serves the 27 "orphaned counties" of Upstate NY which had no regional access to the International Science and Engineering Fair, founded in 1950. Since 1960, some NYS students have participated in regional science fairs.

Finally, now the TRSEF can bring 350,000 Upstate students in grades 5-12 this powerful chance for unique discovery experiences in science, technology, engineering and mathematics (STEM). Using Fair Day as the catalyst, we capture the passion and imagination of children and connect them with adults eager to "pass the torch" of their knowledge. "Science fair kids" challenge their minds, apply the skills they learn in school, "try on" possible careers ... and have fun. The TRSEF also offers real advantages to communities and industries which recognize future workforce needs and want to act now to fill the STEM pipeline.

The TRSEF engages young people in the discovery of science and technology. It is affordable for parents, youth organizations, and school districts in Western NY, the North Country and the Southern Tier. In addition, the TRSEF is a designated affiliate of the International Science and

Engineering Fair (ISEF), securing for us both regional awards and direct access to this world-class experience for our TRSEF Finalists.

Many middle and high school options for science and engineering experience require a sizeable community sponsorship or school budget

commitment up front. Other programs offer great experiences but cannot easily support a student's long-term creative exploration of a STEM field. Our regional science fair can serve now as an outstanding starting point for children, educators and other concerned adults due to the:

- \* comparative ease of engaging and affirming young people from their first contact with the Fair;
- \* efficiency of using mentors to encourage every student with whom they work;
- \* power of fair experiences to celebrate every youngster with the curiosity and drive to do a poster or research project;
- \* importance of identifying students with high potential, providing commendations, scholarships and advancement to encourage their continuing in precollegiate research, and facilitating access to more advanced tools for investigation so they move forward in scope and technical expertise.

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